

PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

To:

Commissioner
 US Department of Commerce
 United States Patent and Trademark
 Office, PCT
 2011 South Clark Place Room
 CP2/5C24
 Arlington, VA 22202
 ETATS-UNIS D'AMERIQUE
 in its capacity as elected Office

Date of mailing (day/month/year) 25 July 2001 (25.07.01)	
International application No. PCT/US00/28942	Applicant's or agent's file reference RCA 89865
International filing date (day/month/year) 19 October 2000 (19.10.00)	Priority date (day/month/year) 19 October 1999 (19.10.99)
Applicant DUFFIELD, David, Jay et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:
 02 May 2001 (02.05.01)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Pascal Piriou Telephone No.: (41-22) 338.83.38
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PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference RCA 89865	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/US 00/ 28942	International filing date (day/month/year) 19/10/2000	(Earliest) Priority Date (day/month/year) 19/10/1999
Applicant THOMSON LICENSING S.A. et al.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :
- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

- ☒ the text is approved as submitted by the applicant.
- ☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- ☒ the text is approved as submitted by the applicant.
- ☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

- ☒ as suggested by the applicant. 1
☐ None of the figures.
- ☐ because the applicant failed to suggest a figure.
- ☐ because this figure better characterizes the invention.

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT


(PCT Article 36 and Rule 70)

Applicant's or agent's file reference RCA 89865	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US00/28942	International filing date (day/month/year) 19/10/2000	Priority date (day/month/year) 19/10/1999
International Patent Classification (IPC) or national classification and IPC H04N7/167		
Applicant THOMSON LICENSING S.A. et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
- ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).
- These annexes consist of a total of 5 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☐ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 02/05/2001	Date of completion of this report 14.11.2001
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Luckett, P Telephone No. +49 89 2399 8965



**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/US00/28942

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, pages:

1-6 as originally filed

Claims, No.:

1-22 as received on 29/10/2001 with letter of 25/10/2001

Drawings, sheets:

1/2,2/2 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/US00/28942

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application.

☒ claims Nos. 1-22.

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 1-18 are so unclear that no meaningful opinion could be formed (*specify*):
see separate sheet

☒ the claims, or said claims Nos. 1,5,13,17 are so inadequately supported by the description that no meaningful opinion could be formed.

☒ no international search report has been established for the said claims Nos. 19-22.

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the standard.

☐ the computer readable form has not been furnished or does not comply with the standard.

Re Item III

Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

- 1a The features of the independent claims are cast in such broad and vague terms that these claims are not deemed to find adequate technical support in the description nor to be adequately clear to enable a fair determination of their intended scope (Art 6, PCT).
- 1b The features of the independent claims are not defined with sufficient explanation of the interworking technical relationship there between.
- 1c The terms: "approval code", "code associated with", "data associated with said source and sink devices" (claim 1 et seq); "identifiers associated with", "data corresponding to said identifiers" (claim 5 et seq); are vague and unclear and leave the reader in doubt as to the meaning of the technical features to which they refer, thereby rendering the definition of the subject-matter of the claims unclear (Art 6 PCT).
- 1d The independent claims 1, 5, 13, 17 all rely upon a different range/combination of features. In addition to the above obscurities, further doubt is cast upon the claims' intended scope by the disparity between the features of the respective independent claims to the extent that it is not apparent that the claims as a whole even define a single invention. They are not so linked as to form a single general inventive concept (Rule 13.1 PCT)
- 1e The dependent claims generally give rise to similar objection. They are not such as to be of any assistance in the technical interpretation of their respective head claims.
- 2 In as far as their scope can at present be determined, it appears that at least some of the broader claims are rendered obvious by a skilled person's common knowledge coupled with the disclosure of :-
- 3 D1: WO 99 07150 A (SCIENTIFIC ATLANTA) 11 February 1999 (1999-02-

11)

- 4 The newly filed claims 19-22 were not included in the application as originally filed. No international search has been drawn up in respect of these claims. As no indication has been provided of any part of the original description which could form a basis for these new claims, they appear to constitute the inadmissible addition of subject matter. Article 19(1) &(2) PCT
- 5 The independent claim/s/ should be cast in the two part form, with those features which in combination are part of the prior art (see document D1) being placed in the preamble. This is considered to be particularly appropriate in the present case as it is regarded as essential to establishing a clear picture of the contribution made by the applicants vis-a-vis the closely relevant subject matter known from D1.
- 6 Reference signs in parentheses inserted in the claims would increase their intelligibility. This applies to both the preamble and characterising portion.
- 7 The description should be brought into conformity with the any new claims filed; care should be taken during revision, especially of the introductory portion including any statements of problem or advantage, not to add subject-matter which extends beyond the content of the application as originally filed.
- 8 Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the document D1 is not mentioned in the description, nor is this document identified therein. To reflect the state of the art adequately in the description, the document D1 should be identified in the opening pages and the relevant background art disclosed therein should be briefly discussed.

7
CLAIMS

REPLACED BY
ART 34 AMDT

1. A method for verifying that a source device is authorized to communicate protected content to a sink device comprising:

receiving at said source device an approval code associated with said source and sink
5 devices;

determining, in said source device, a local code using data associated with said source and sink devices; and

comparing at least a portion of said approval code to at least a portion of said local code.

10

2. The method according to claim 1, wherein said approval code is determined based on a hash calculation using identifiers uniquely associated with said source and sink devices and wherein said local code is determined based on a hash calculation using data from said sink device and a source identifier prestored in said source device.

15

3. The method according to claim 2, wherein said data associated with said source device for determining said local code is not public information and wherein said data associated with said sink device for determining said local code is public information.

20 4. The method of Claim 2, wherein said identifiers are serial numbers or other identification codes accessible to a user, and wherein said data from said sink device used in said hash calculation is a public key.

5. A method for verifying that a source device is authorized to communicate protected content to a sink device comprising:

providing substantially unique identifiers associated with said source and sink devices
5 to a validation authority;

receiving from said validation authority an approval code, said approval code using data corresponding to said identifiers;

determining, in said source device, a local code using said data associated with said source and sink devices, and

10 comparing at least a portion of said approval code to at least a portion of said local code.

6. The method of Claim 5, further comprising said validation authority providing said at least portion of said approval code to a user, and said user providing said at least portion of
15 said approval code to said source device.

7. The method of Claim 5, wherein said substantially unique identifiers are provided to said validation authority by said user.

20 8. The method of Claim 5, wherein said source device is selected from one of an access device and a media player and wherein said sink device is a digital television.

9. The method of Claim 5, wherein said data associated with said source device is secured so as not to be readily ascertainable by said user.

10. The method of Claim 5, wherein said data associated with said source and sink devices comprises a unique identification indicative of said source device and a public encryption key associated with said sink device.

5 11. The method of Claim 10, wherein said unique identification indicative of said source device is secured from a user of said source device.

12. The method of Claim 1, further comprising said source device communicating whether said source device is authorized to provide said content to said sink device to a user, and
10 intentionally delaying communicating whether or not said compared approval code and local code are consistent.

13. A method for authenticating at least one security key and at least one identifier used to access protected content, said method comprising:

15 receiving at a first device a plurality of security keys with said content;

receiving said identifier at said first device to be used to provide said content to a second device, said identifier being associated with said second device;

selecting one of said plurality of security keys using said first device; and,

providing said content to said second device using said first device and selected
20 security key.

14. The method according to claim 13, further comprising providing a serial identification indicative of said second device for accessing said content to a validation authority.

15. The method according to claim 14, further comprising determining an identifier associated with said second device using said serial identification.

5 16. The method of Claim 13, wherein said plurality of security codes are indexed in a table of keys and said identifier is the index of said select key in the table of keys and a result of a hash function of said identifier.

10 17. A method for verifying that a source device having an associated substantially unique identification and serial number and a sink device having a substantially unique key and serial number should have access to content by using a validation authority, wherein said unique identification is secured from access by a user of said source device, said method comprising:

providing said serial numbers to said validation authority;

said validation authority determining said substantially unique identifier using said serial numbers; and, if said access to said content is authorized,

15 said validation authority determining an authorization identifier using said substantially unique identifier;

said source device determining a local identifier using said substantially unique identifier; and,

20 verifying said source device and sink device should have access to content if said authorization identifier and local identifier correspond to one another.

18. The method of Claim 17, further comprising said validation authority providing said at least portion of said authorization identification to a user, and said user providing said authorization identification to said source device.

19. A method for verifying that a set top box is authorized to communicate protected content to a digital television comprising:

5 receiving at said set top box an approval code associated with said set top box and said digital television;

determining, in said set top box, a local code using data associated with said set top box and said digital television; and

10 comparing at least a portion of said approval code to at least a portion of said local code.

20. The method of claim 19, wherein the approval code is generated using the respective serial numbers of the set top box and the digital television.

15 21. A method for verifying that a digital video recorder is authorized to communicate protected content to a digital television comprising:

receiving at said digital video recorder an approval code associated with digital video recorder and said digital television;

determining, in said digital video recorder, a local code using data associated with said digital video recorder and said digital television; and

20 comparing at least a portion of said approval code to at least a portion of said local code.

22. The method of claim 21, wherein the approval code is generated using the respective serial numbers of the digital video recorder and the digital television.

PATENT COOPERATION TREATY

EXPRESS EV 025 306745

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

To:

TRIPOLI, Joseph S.
THOMSON MULTIMEDIA LICENSING INC.
P.O. Box 5312
Princeton, New Jersey 08540
ETATS-UNIS D'AMERIQUE

RECEIVED

NOV 27 2001

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NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT
(PCT Rule 71.1)

DTS/DTS

Date of mailing
(day/month/year)

14.11.2001

Applicant's or agent's file reference
RCA 89865

IMPORTANT NOTIFICATION

International application No.
PCT/US00/28942International filing date (day/month/year)
19/10/2000Priority date (day/month/year)
19/10/1999

Applicant

THOMSON LICENSING S.A. et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Event	OA Final Country Selection
Deadline	19 Feb 2002
Entered	DPE 11/28/01

Name and mailing address of the IPEA/



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Authorized officer

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INTERNATIONAL SEARCH REPORT

 Inter. Application No
 PCT 00/28942

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H04N7/16 H04N7/16 H04N5/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 99 22372 A (SONY ELECTRONICS INC) 6 May 1999 (1999-05-06) abstract; figures 5A,7 page 4	1,5,13, 17
A	WO 99 07150 A (SCIENTIFIC ATLANTA) 11 February 1999 (1999-02-11) page 8, line 8 - line 25 page 10, line 19 - line 24 page 11, line 11 - line 14 page 52, line 27 - line 29	1,5,13, 17
A	US 5 420 866 A (WASILEWSKI ANTHONY J) 30 May 1995 (1995-05-30) column 1, line 14 -column 7, line 7 figures 1-8	1,5,13, 17
	-/--	

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

G document member of the same patent family

Date of the actual completion of the international search

5 February 2001

Date of mailing of the international search report

12/02/2001

Name and mailing address of the ISA

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Authorized officer

Tito Martins, J

INTERNATIONAL SEARCH REPORT

Inter Application No
PCT 00/28942

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 858 184 A (NDS LTD) 12 August 1998 (1998-08-12) column 1, line 12 -column 7, line 20 figures 1-5	1,5,13, 17
A	---- "FUNCTIONAL MODEL OF A CONDITIONAL ACCESS SYSTEM", EBU REVIEW- TECHNICAL, BE, EUROPEAN BROADCASTING UNION. BRUSSELS, NR. 266, PAGE(S) 64-77 XP000559450 ISSN: 0251-0936 the whole document	1,5,13, 17
P,A	---- WO 00 56068 A (THOMSON LICENSING S A ;DEISS MICHAEL SCOTT (US); ESKICIOGLU AHMET) 21 September 2000 (2000-09-21) page 2, line 14-29 page 4, line 4 -page 5, line 14 figures 1-8 -----	1,5,13, 17

INTERNATIONAL SEARCH REPORT

information on patent family members

International Application No

PCT/00/28942

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9922372 A	06-05-1999	AU 1103599 A EP 1012840 A	17-05-1999 28-06-2000
WO 9907150 A	11-02-1999	AU 1581699 A AU 8670598 A AU 8679798 A AU 8679898 A AU 8764298 A AU 8823398 A AU 8823698 A EP 1010323 A EP 1010324 A EP 1010325 A EP 1013091 A EP 1000508 A EP 1000509 A EP 1000511 A WO 9907145 A WO 9907146 A WO 9907147 A WO 9907148 A WO 9907149 A WO 9909743 A US 6105134 A	08-03-1999 22-02-1999 22-02-1999 22-02-1999 22-02-1999 22-02-1999 22-02-1999 21-06-2000 21-06-2000 21-06-2000 28-06-2000 17-05-2000 17-05-2000 17-05-2000 11-02-1999 11-02-1999 11-02-1999 11-02-1999 11-02-1999 25-02-1999 15-08-2000
US 5420866 A	30-05-1995	AU 687844 B AU 7220994 A CA 2186368 A,C JP 2940639 B JP 9511369 T WO 9526597 A	05-03-1998 17-10-1995 05-10-1995 25-08-1999 11-11-1997 05-10-1995
EP 0858184 A	12-08-1998	IL 120174 A GB 2322030 A,B	28-10-1999 12-08-1998
WO 0056068 A	21-09-2000	AU 3629100 A	04-10-2000